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(54) **NONUNIFORM CORRUGATED DIAPHRAGM FOR MEMS TUNERS AND ACTUATORS**

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See application file for complete search history.

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(57) **ABSTRACT**

A cavity resonator tuning diaphragm comprising a plurality of inner corrugations, the plurality of inner corrugations having a first depth. An outer corrugation located between the plurality of inner corrugations and a perimeter of the diaphragm is also included, the outer corrugation having a second depth greater than the first depth. The addition of the outer deep corrugation provides increased thermal stability and reduced required actuation voltage.

10 Claims, 13 Drawing Sheets